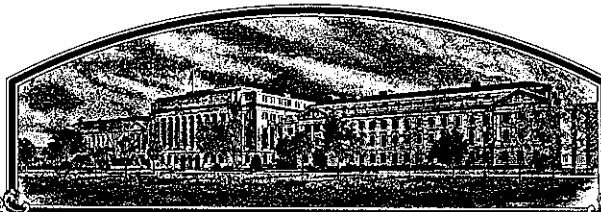


No.

8700188



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Plant Breeders 1, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Syringa'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D. C. this 31st day of August in the year of our Lord one thousand nine hundred and eighty-nine.

Attest:

Kenneth A. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Clayton Yentler
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

1 NAME OF APPLICANT(S) Plant Breeders 1, Inc.		2 TEMPORARY DESIGNATION PB1-80-WW-5	3 VARIETY NAME SYRINGA
4 ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 851 East 7th Street Moscow, Idaho, 83843		5 PHONE (Include area code) (208)882-4483	FOR OFFICIAL USE ONLY PVPO NUMBER 8700188
6 GENUS AND SPECIES NAME Triticum aestivum	7 FAMILY NAME (Botanical) Graimeae		FILING DATE August 18, 1987 TIME 1:30 <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.
8 KIND NAME	9. DATE OF DETERMINATION October 1, 1982		AMOUNT FOR FILING \$ 1800.00 DATE August 18, 1987
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation		AMOUNT FOR CERTIFICATE \$ 200.00 DATE August 14, 1989	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Idaho		12. DATE OF INCORPORATION Jan. 1, 1985	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Wayne L. McProud 851 East 7th Street Moscow, Idaho 83843 PHONE (Include area code). (208)882-4483			

14 CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

- a. ☒ Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
b. ☒ Exhibit B, Novelty Statement.
c. ☒ Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.)
d. ☒ Exhibit D, Additional Description of Variety.
e. ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) ☒ Yes (If "Yes," answer items 16 and 17 below) ☐ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?

☒ Yes ☐ No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?

☒ Foundation ☒ Registered ☒ Certified

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?

☐ Yes (If "Yes," give date)☒ No

19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?

☐ Yes (If "Yes," give names of countries and dates)☒ No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT

DATE

SIGNATURE OF APPLICANT

DATE

13A: Origin and breeding history of 'Syringa'

A bulk from numerous F2 plants, resulting from many different crosses among many different parents, was obtained by Plant Breeders 1, Inc. from the CIMMYT, Oregon State University International Winter Wheat Breeding Program in 1978. Plant Breeders 1, Inc. grew this diverse population as an F3 bulk (1979) and as an F4 bulk (1980). In the F4 generation (1980) a large number of single plant selections, including the selection destined to become 'Syringa', were made. These selections were entered into a screening nursery the following season (1981). 'Syringa' was then entered into preliminary, intermediate and advanced PB1 yield nurseries in succeeding years. In 1983 'Syringa' was head hilled to select for line uniformity. A second round of head hilling was done in 1987 in preparation for the 1988 breeders seed increase. 'Syringa', which is composed of 135 separate sub-lines bulked together, is stable and uniform.

13B. Exhibit B. Novelty Statement

'Syringa' is most similar to the soft white winter wheat 'Hyslop'. 'Syringa' differs from 'Hyslop' by being 9 cm taller; heading 1 day earlier; having a longer, narrower first leaf below flag leaf (27 cm X 14 mm versus 26 cm X 16 mm); having a 3.4 cm greater flag leaf to first leaf below flag leaf distance; and having a 3% greater average test weight. 'Syringa's' head color according to Royal Horticultural Society Colour Charts is 137-B versus 138-C for 'Hyslop'.

13B. Addendum

The height difference of 9 cm between 'Syringa' and 'Hyslop' is based on 8 station years of data [Table 1]. The heading date difference of 1 day between 'Syringa' and 'Hyslop' is presented with 6 station years of data [Table 2]. The data on differences between the size of the first leaf below the flag leaf and between the distance from the flag leaf to the first leaf below were collected in 1987 by making 20 random measurements for each variety within a block of 3 foot long rows planted at 1 foot intervals. Differences in head color were measured within the above same block by comparing 'Syringa' and 'Hyslop' to the Royal Horticultural Society Colour Charts. Test weight data were collected from grain samples obtained from 6 different yield trials [Table 3].

TABLE 1: COMPARATIVE PLANT HEIGHTS BETWEEN 'SYRINGA' AND 'HYSLOP' IN CENTIMETERS

Location and Year		'Hyslop'	'Syringa'
Culdesac ID	1988	89	101
Culdesac ID	1987	81	86
Culdesac ID	1986	81	97
Hermiston OR	1986	74	86
Culdesac ID	1985	86	94
Culdesac ID	1984	89	97
Culdesac ID	1983	91	89
Culdesac ID	1982	71	84
AVERAGE		82.8	91.8

TABLE 2: COMPARATIVE HEADING DATES BETWEEN 'SYRINGA' AND
'HYSLOP' IN DAYS FROM JANUARY 1

Location and Year		'Hyslop'	'Syringa'
Culdesac ID	1981	149	149
Culdesac ID	1984	161	161
Culdesac ID	1985	154	152
Culdesac ID	1986	151	150
Culdesac ID	1987	135	135
Culdesac ID	1988	158	155
AVERAGE		151.3	150.3

TABLE 3: COMPARATIVE TEST WEIGHTS BETWEEN 'SYRINGA' AND
'HYSLOP' IN POUNDS PER BUSHEL

Location and Year		'Hyslop'	'Syringa'
Culdesac ID	1988	57.7	58.7
Culdesac ID	1987	59.0	60.6
Hermiston OR	1986	60.4	62.0
Culdesac ID	1986	56.0	58.0
Culdesac ID	1985	54.5	58.1
Culdesac ID	1984	61.1	61.6
AVERAGE		58.1	59.8

TABLE A: 20 RANDOM MEASUREMENTS IN CENTIMETERS OF THE DISTANCE BETWEEN THE FLAG LEAF AND THE LEAF BELOW FOR THE SOFT WHITE WINTER WHEATS 'SYRINGA' AND 'HYSLOP'. THESE DATA WERE COLLECTED BY PBI AT CULDESAC, IDAHO, IN 1987.

	'SYRINGA'	'HYSLOP'
	22.0	19.9
	22.4	19.3
	23.5	18.0
	22.0	18.0
	23.4	19.7
	20.5	18.0
	22.7	16.5
	20.6	18.0
	20.9	18.4
	20.4	17.0
	23.0	20.0
	21.2	21.0
	22.8	15.0
	20.6	19.0
	22.5	20.0
	23.0	19.5
	21.2	18.7
	21.0	18.0
	24.9	18.5
	19.0	18.0
AVERAGE	21.9	18.5

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Plant Breeders 1

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

851 East 7th Street
Moscow, Idaho 83843

FOR OFFICIAL USE ONLY

PVPO NUMBER

8700188

VARIETY NAME OR TEMPORARY
DESIGNATION

SYRINGA

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. 089 or 09) when number is either 99 or less or 9 or less.

1. KIND:

1 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

2 1 = SPRING 2 = WINTER 3 = OTHER (Specify) 1 1 = SOFT 2 = HARD 3 = OTHER (Specify)1 1 = WHITE 2 = RED 3 = OTHER (Specify)

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

217 FIRST FLOWERING 226 LAST FLOWERING

4. MATURITY (50% Flowering):

02 NO. OF DAYS EARLIER THAN 5 1 = ARTHUR 2 = SCOUT 3 = CHRIS
 NO. OF DAYS LATER THAN 4 = LEMHI 5 = NUGAINES 6 = LEEDS

5. PLANT HEIGHT (From soil level to top of head):

092 CM. HIGH
07 CM. TALLER THAN 5 1 = ARTHUR 2 = SCOUT 3 = CHRIS
 CM. SHORTER THAN 4 = LEMHI 5 = NUGAINES 6 = LEEDS

6. PLANT COLOR AT BOOTING (See reverse):

3 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHUR COLOR:

1 1 = YELLOW 2 = PURPLE

8. STEM:

1 Anthocyanin: 1 = ABSENT 2 = PRESENT2 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT04 NO. OF NODES (Originating from node above ground)2 Waxy bloom: 1 = ABSENT 2 = PRESENT1 Internodes: 1 = HOLLOW 2 = SOLID23 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

2 Anthocyanin: 1 = ABSENT 2 = PRESENT2 Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

1 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED
3 = OTHER (Specify):2 Flag leaf: 1 = NOT TWISTED 2 = TWISTED1 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT2 Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT15 MM. LEAF WIDTH (First leaf below flag leaf)27 CM. LEAF LENGTH (First leaf below flag leaf)

11. HEAD:

☐ 1 Density: 1 = LAX 2 = DENSE
 ☐ 2 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
 4 = OTHER (Specify) _____

☐ 4 Awedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

☐ 7 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
 5 = BROWN 6 = BLACK 7 = OTHER (Specify): Blond

☐ 1 ☐ 2 CM. LENGTH
 ☐ 1 ☐ 4 MM. WIDTH

12. GLUMES AT MATURITY:

☐ 3 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.)
 3 = LONG (CA. 9 mm.)
 ☐ 3 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
 3 = WIDE (CA. 4 mm.)

☐ 1 Shoulder 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
 shape: 4 = SQUARE 5 = ELEVATED 6 = APICULATE
 ☐ 3 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

☐ 1 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

☐ 2 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

☐ 3 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

☐ 1 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL
 ☐ 1 Cheek: 1 = ROUNDED 2 = ANGULAR

☐ 1 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG
 ☐ 1 Brush: 1 = NOT COLLARED 2 = COLLARED

☐ 4 Phenol reaction 1 = IVORY 2 = FAWN 3 = LT. BROWN
 (See instructions): 4 = BROWN 5 = BLACK

☐ 2 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

☐ 0 ☐ 7 MM. LENGTH
 ☐ 0 ☐ 3 MM. WIDTH
 ☐ 4 ☐ 3 GM. PER 1000 SEEDS

17. SEED CREASE:

☐ 2 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'
 2 = 80% OR LESS OF KERNEL 'CHRIS'
 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'
 ☐ 1 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'
 2 = 35% OR LESS OF KERNEL 'CHRIS'
 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 STEM RUST (Races) _____
 ☐ 0 LEAF RUST (Races) _____
 ☐ 0 STRIPE RUST (Races) _____
 ☐ 0 LOOSE SMUT

☐ 0 POWDERY MILDEW
 ☐ 0 BUNT
 ☐ 0 OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 SAWFLY
 ☐ 0 APHID (Bydv.)
 ☐ 0 GREEN BUG
 ☐ 0 CEREAL LEAF BEETLE

☐ 0 OTHER (Specify) _____
 HESSIAN FLY RACES:
 ☐ 0 GP
 ☐ 0 A
 ☐ 0 B
 ☐ 0 C

☐ 0 D
 ☐ 0 E
 ☐ 0 F
 ☐ 0 G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Hyslop	Seed size	Hyslop
Leaf size	Hyslop	Seed shape	Hyslop
Leaf color	Hyslop	Coleoptile elongation	Hyslop
Leaf carriage	Hyslop	Seedling pigmentation	Hyslop

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Briggie and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

13D. Exhibit D: Additional description of 'Syringa'

'Syringa' is a soft white winter wheat, *Triticum aestivum* L.

When seeded at Culdesac, Idaho, on or about October 5, 'Syringa's' average heading date is May 29, or 3 days later than 'Stephens'. 'Syringa's' coleoptile color is white; juvenile growth erect; color at booting blue-green. 'Syringa' averages 88 cm in height, that being 1 cm taller than 'Stephens'.

'Syringa' has yellow anthers; stems, after heading, lack anthocyanin, have a waxy bloom, are hollow with 4 nodes; have a length of 23 cm between flag leaf and first leaf below. The last rachis internode has hairs on the edge.

'Syrina's' auricles have anthocyanin and hairs. Its flag leaf at booting is erect, twisted; flag leaf sheath waxy. First leaf below flag leaf is glabrous, 14 mm wide and 27 cm long. Head is awned, lax, strap tending toward clavate (particularly under irrigation), blond colored at maturity, 12 cm long, 15 mm wide. Glumes are long, wide; shoulders wanting to oblique; beak acuminate.

'Syringa's' seed is ovate to elliptical; cheek rounded; brush short non-collared; amber to white in color; 7 mm long, 3 mm wide; phenol reaction brown; seed crease width 80% of kernal, depth 20% of kernal.



13D. Exhibit D: Additional description of 'PB1-80-WW-5'

'PB1-80-WW-5' is a soft white winter wheat, *Triticum aestivum* L.

When seeded at Culdesac, Idaho, on or about October 5, 'PB1-80-WW-5's' average heading date is May 29, or 3 days later than 'Stephens'. 'PB1-80-WW-5's' coleoptile color is white; juvinal growth erect; color at booting blue-green. 'PB1-80-WW-5' averages 92 cm in height, that being 2 cm taller than 'Stephens'.

'PB1-80-WW-5' has yellow anthers; stems, after heading, lack anthocyanin, have a waxy bloom, are hollow with 4 nodes; have a length of 23 cm between flag leaf and first leaf below. The last rachis internode has hairs on the edge.

'PB1-80-WW-5's' auricles have anthocyanin and hairs. Its flag leaf at booting is erect, twisted; flag leaf sheath waxy. First leaf below flag leaf is glabrous, 14 mm wide and 27 cm long. Head is awned, lax, strap, blond colored at maturity, 12 cm long, 15 mm wide. Glumes are long, wide; shoulders wanting to oblique; beak acuminate.

'PB1-80-WW-5's' seed is ovate to elliptical; cheek rounded; brush short non-collared; amber to white in color; 7 mm long, 3 mm wide; phenol reaction brown; seed crease width 80% of kernal, depth 20% of kernal. 'PB1-80-WW-5' has an average test weight of 60.2 lbs/bu, 9.7% flour protein, 9.01 cm cookie diameter (9.00 corrected for protein), and an average milling score of 82.7.

8700188

13E. Exhibit E. Statement of the Basis of Applicant's Ownership

Plant Breeders 1 is the breeder of 'PB1-80-WW-5'.